

1.05	AUTOMATIC CONTROL; SIGNALING OR INDICATING	29	HARD MATERIAL DISINTEGRATING MACHINES
1.1	.Ore/rock interface determination during cutting	30	.Remote control
1.2	..On cutter head	31	.Stepper-type advance-causing means
1.3	.Of tunneling apparatus having a wall temporary support	32	..Planer-type cutter
1.4	.Of hard material disintegrating machines	33	.With mine roof-supporting means
1.5	..Floor working	63	.Cutting kerfs to form block
1.6	..Sidewall working (e.g., longwall-type)	34.01	.Cutter attached to endless chain or cable (e.g., planer type)
1.7	...Of advancing material handling means or roof support	34.02	..With auxiliary cutter
1.8	..Of rotary cutter with advance direction coincident or parallel to rotary axis	34.03	...Roof-type cutter
1.9	.Of material handling means	34.04	..Planer, plow, or knife details
2	TUNNEL RECOVERY OF FLUID MATERIAL	34.05	...With fluid supply
3	IN SITU CONVERSION OF SOLID TO FLUID	34.06	...With vibrator
4	.Input and output wells	34.07	..Drive details
5	.Dissolving or chemical reaction	34.08	..Vertical height adjustment of entire installation
6	.Melted material recovered	34.09	..Chain features and connected to miner
7	WITH SEPARATION OF MATERIALS	34.1	..Guide, associated with conveyor, for chain or supply lines
8	.Separation below surface of earth or water	34.11	..Guide for adjustment of cutter
9	.Material mined or excavated underwater	34.12	..Pivoting cutter body
10	PROCESSES	35	.Wire saw-type cutter
11	.Stabilizing underground structure	36.1	.Floor-working
12	.Mine safety	37.1	..Reciprocating or oscillating cutter
13	.Explosive	37.2	...Resonant vibrator driven
14	.Directly applying heat or vibration	38.1	...Narrow, channel-forming type
15	.Forming blocks (e.g., quarrying)	37.3	..Impact or hammering type cutter
16	.Breaking down by direct contact with fluid	37.4	...Hydraulic piston and cylinder type
17	..Jetting (e.g., hydraulic mining)	37.5	...Hammer and anvil type
18	.With material-handling	39.1	..Rotary cutter
19	MINE LAYOUTS	39.2	...With material handling
20	EXPANSIBLE BREAKING-DOWN DEVICES	39.3	...Slot-type cutter; e.g., pavement saw
21	.Fluid-pressed element	39.4	...Drum-type
22	..Piston	39.5	....Shiftable horizontally
23	.Wedge	39.6	....Height adjustment
24	ICE-WORKING DEVICES	39.7	....Yieldably mounted cutter
25	.Relatively moving cutter	39.8	....Specific mount for fixed projecting cutters
26	..Reciprocating	39.9	...And having rotatable cutting element
27	..Block-cutting type	40.1	...Freely rolling cutter
28	...Plural blades	41.1	...Vertical cutter axis
		42	.Sidewall-working (e.g., longwall cutter)
		43	..With material-handling means

44	...Undercutting, dislodging and conveying	85.1	.Plural heads moving relative to each other
45	...Material handler enters cut with cutter	80.1	.Adjustable head
46	...Rotary impeller	81.1	.Cleansing fluid passage
47	..Driven flexible member causes advance	81.2	..Fluid feed distributor or controller (e.g., manifold)
48	...Cutter shiftable horizontally	81.3	..Nozzle or seal details
49	...Driver for member rotates about horizontal axis	82.1	.Endless-chain type head
50	....Axis transverse to direction of advance	83.1	..Plural teeth on single link
51	..Horizontal cutter tooth orbit	84.1	..Nontracking tooth arrangement
52	...Cutter shiftable horizontally	85.2	.Adjustable tooth
53	..Vertical cutter tooth orbit	87.1	.Tooth mounted on helical head portion or head with helical conveying portion
54	...Cutter bodily shiftable horizontally	100	.Percussive tooth or bit
55	..Rotary cutter head with advance direction coincident or parallel to rotary axis	101	.Plural cutting edges on tooth, pick, or bit
56	..With material-handling means	102	.Clamped tooth holder or tooth mount
57	...Cooperates with laterally spaced heads	103	.Clamped tooth
58	..Machine follows cutter into opening formed thereby	104	.Wear shield or replaceable wear sleeve
59	...Relatively driven cutters	105	.Wear resistant feature for tool body (e.g., hard facing)
60	....Cutting area of one encircled by another	106	.Rolling or rotatable type bit mount
61	...Radially adjustable cutting area	107	..Having a spring biased retainer
62	...With percussive-type cutter	108	.Planar type bit mount
64	..With material-handling means	109	..Tooth mounting spring biased
65	..Undercutting, dislodging and conveying	110	.Rolling or rotatable bit
66	...Undercutter shiftable horizontally	111	..Insert or tip shape
67	..Material handler enters cut with cutter	112 R	.Planar type bit
68	..Rotary impeller	112 T	..Planer-type cutter insert or tip shape
69	..Percussive-type cutter	113	.Insert or tip mounting feature (e.g., soldering, brazing, friction or interference fit)
70	..Cutter shiftable horizontally	95	MISCELLANEOUS
71	..Relatively shiftable cutters		
72	..Shiftable to operate in vertical or horizontal cutter tooth orbit		
73	.Cutter shiftable horizontally		
74	..Horizontal cutter tooth orbit		
75	..Shiftable vertically		
76	.Cutter shiftable vertically		
77	.Horizontal cutter tooth orbit		
78	.Vertical cutter tooth orbit		
79.1	CUTTER TOOTH OR TOOTH HEAD		

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